UNIVERSITEIT GENT

FACULTY OF **VETERINARY MEDICINE**
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# Museum of Morphology

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This scientific morphological collection is located on the campus of the UGent Faculty of Veterinary Medicine and is allied to its Department of Morphology. Research, teaching and public education are intensively interrelated in this museum. The majority of objects stem from research projects and are frequently demonstrated in practicals for students, workshops and conducted tours for visitors. Furthermore, the study of preservation techniques itself forms part of the research topics of the department. The museum is a place for veterinary students to study anatomy. However during the last years efforts have been made to increase the visibility outside the university as well.

Today the collection is to a large extent on public display, as a digital database is being composed of which a representative sample of records is visible online, completed with a scientific and vulgarized description. In addition an education service for primary and secondary schools is being established and the museum participates in science popularizing programs (e.g. a workshop in comparative anatomy on the left). The museum houses three types of specimens, namely **skeletons**, **plastinates** and **corrosion casts** of vertebrate species, mainly of domestic animals. Although specimens of other species are collected to demonstrate comparative anatomy (e.g. preparation of mandibulae of a fin whale on the right).

## Skeletons

Skeleton of a mounted horseman. This didactic model in comparative anatomy emphasizes the analogy of the bony structures in vertebrate species.

The study of comparative zoological anatomy commences with the study of the skeleton. Therefore, the morphology department keeps abreast of the latest developments in the expertise of preparing and preservating bones. Equipment for degreasing bony tissues and a Dermestid beetle (*Dermestes spp.*) colony are available.

Skeleton of bovine Siamese twins (diplopagus), that are fused at the level of head and thorax (cephalothoracopagus). A part of the collection demonstrates developmental anomalies.

## Plastinates

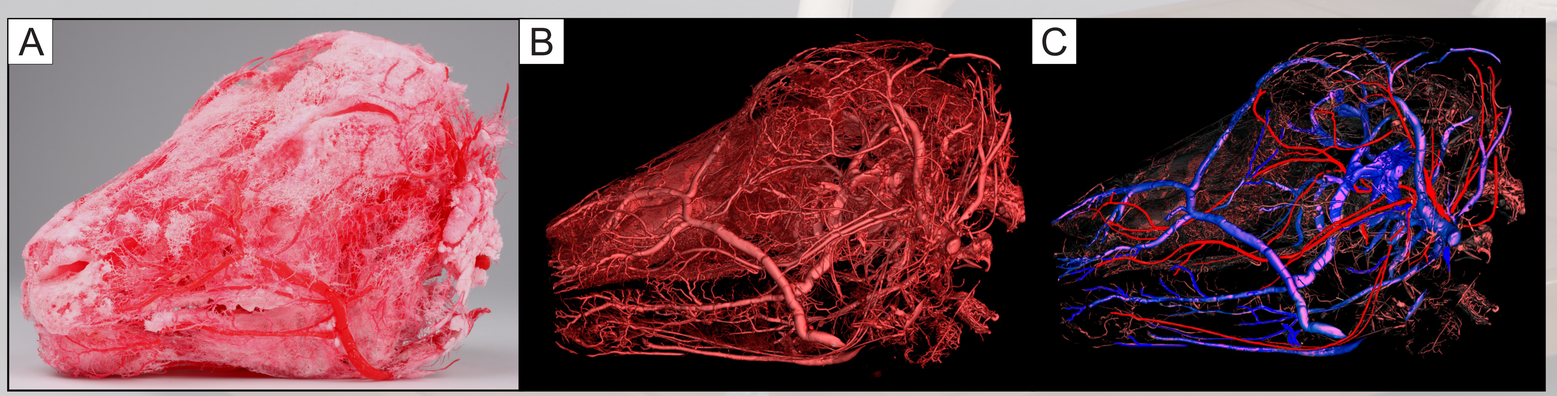
Plastinate of a bovine foetus (3-4 months gestation). This model demonstrates foetal organs and vessels of the umbilical cord.

In the plastination technique water and liquid tissues are replaced by curable polymers such as silicone, epoxy and polyester-copolymer. This process results in dry, flexible and non-toxic specimens. These qualities make the plastinates suitable didactic models and highly approachable objects for museum visitors.

Plastinate of the male canine urinary and genital tracts.

## Corrosion Casts

The UGent Veterinary Department of Morphology has a long tradition studying blood vessels. To gain more insight in the vascular anatomy, corrosion casts are created by injecting a liquid resin (monomer) into blood vessels of a cadaver. After polymerization of the resin the soft tissues are macerated.




Vascular corrosion cast of a sheep head. In this particular case the resin fills the capillaries that mask the larger blood vessels (A). The latter can be visualized with micro-CT scanning and a subsequent computerized 3D-reconstruction (B). Using computer software densities not corresponding to larger blood vessels can be filtered (C).

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MUSEUM MORFOLOGIE